1. Deep Learning is a field within the great field of Machine Learning. Deep Learning focuses on (not only findind trends and patterns) but also finding relationships and patterns between factors and inputs used to both generate output results and predict future results. Deep Learning uses insane amounts of data, datasets of immense sizes, and involve the usage of extravagant amounts of processing power, much more over machine learning since its more complex than machine learning. This also means that deep learning takes a longer time to implement and longer time to train a program to completion. Deep learning can be used for many applications, and the one I am most familiar with involves both image analysis and image manipulation. There exist many programs that have been trained using deep learning techniques to either predict what an image consists of, as well as find related images or similar style images (like artwork, etc). There exist also programs that can edit an existing image in order to be made into the “style” of another image, like turning a picture of your family into a pointillism-style image. I’ve used a few of these myself for fun, but did not realise at the time that these programs and websites were utilizing deep learning techniques to do so.
2. Github is a service and software that provides developers of all types a standard for controlling, collaborating with, working on, sharing, storing, and managing coding projects. Github allows users and/or teams to create online repositories where files and code can be stored, pushed out to, and pulled from. The GitHub application also allows great management tools such as access controls, creation of branches and forks of programs, and also allows users the ability to create local versions of repositories for their own work. GitHub also allows change history and logging features, allowing people to see step by tep what actions were taken. Some also use GitHub to facilitate an open-source style of development, where any user is free to submit changes for approval for the betterment of all users. Some disadvantages to using GitHub is that, many of these great features are locked behind a payment system. While GitHub itself is free, their exist many paid versions of it that contain more features than the free version. GitHub is also cloud-based. While there are features for implementing more on-prem solutions, these are also locked behind payment or purchasing the Business versions of Github.
   1. I have a personal GitHub that I’ve used before to code and collaborate with people online for various hobbies over the year. It is under an alias, as I keep my identity secret online, however. I’ve taken the liberty of detaching old repositories in preparation for this assignment, as some of the code was for old video games that I’m honestly embarrassed to have spent time playing. <https://github.com/Fatih-Volk>